

Appl. No. 09/828,715
Amdt. Dated October 24, 2003
Reply to Final Office Action of July 21, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-40. (Cancelled)

41. (Currently amended) A method for joining substrates, said method comprising:

providing a first substrate having an upper surface and a lower surface and a second substrate having an upper surface and a lower surface;

positioning a continuous thermoplastic tape adjacent to said first substrate and said second substrate such that said tape is in operative communication with said upper and lower surfaces of said first substrate and with said upper and lower surfaces of said second substrate; and

forming a seam by bonding said tape to said upper and lower surfaces of said first substrate and to said upper and lower surfaces of said second substrate, wherein said [[bond]] bonding between said tape and said upper and lower surfaces of said first and second substrates is an adhesive bond, a physical bond, or combinations thereof includes physical bonding and, optionally, adhesive bonding.

42. (Currently amended) A method as defined in claim [[38]] 41, further comprising heating at least a portion of said tape to a predetermined temperature.

43. (Currently amended) A method as defined in claim [[39]] 42, wherein said temperature is between about 10°C below and about 50°C above a thermal melting temperature of said at least a portion of said tape.

44. (Currently amended) A method as defined in claim [[38]] 41, further comprising subjecting at least a portion of said tape to pressure.

45. (Currently amended) A method as defined in claim [[41]] 44, wherein said pressure is between about 40 pounds per square inch to about 120 pounds per square inch.

46. (Currently amended) A method as defined in claim [[38]] 41, further comprising subjecting said tape to simultaneous heat and pressure.

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47. (Currently amended) A method as defined in claim [[38]] 41, wherein said first substrate and said second ~~substrates~~ substrate are fabrics.

48. (Currently amended) A method as defined in claim [[38]] 41, wherein at least a portion of said tape contains multiple layers.

49. (Currently amended) A method as defined in claim [[45]] 48, wherein one of said layers contains a thermoplastic material having a first thermal melting temperature and another of said layers contains a thermoplastic material having a second thermal melting temperature, said second thermal melting temperature being greater than said first thermal melting temperature.

50. (Currently amended) A method as defined in claim [[38]] 41, further comprising folding said tape into a certain shape.

51. (Currently amended) A method as defined in claim [[47]] 50, wherein said tape is folded into a z-shaped configuration.

52. (Currently amended) A method as defined in claim [[47]] 50, wherein said tape is folded prior to being positioned adjacent to said first substrate and said second substrate.

53. (Currently amended) A method as defined in claim [[47]] 50, wherein said tape is folded after being positioned adjacent to said first substrate and said second substrate.

54. (Currently amended) A method as defined in claim [[38]] 41, further comprising etching at least one of said surfaces of said first substrate, said second substrate, or combinations thereof.

55. (Currently amended) A method as defined in claim [[38]] 41, wherein an edge defined by said upper and lower surfaces of at least one of said substrates is non-linear.

56. (Currently amended) A method as defined in claim [[38]] 41, wherein said tape comprises polyurethane.

57. (Currently amended) A method for joining fabrics comprising:
providing a first fabric having an upper surface and a lower surface and a second fabric having an upper surface and a lower surface;

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folding a continuous thermoplastic tape into a z-shaped configuration and positioning said tape adjacent to said first fabric and said second fabric such that said tape is in operative communication with said upper and lower surfaces of said first fabric and with said upper and lower surfaces of said second fabric; and

forming a seam by subjecting said tape to simultaneous heat and pressure, thereby bonding said tape to said upper and lower surfaces of said first fabric and to said upper and lower surfaces of said second fabric, wherein said ~~[[bond]]~~ bonding between said tape and said upper and lower surfaces of said first and second fabrics is ~~an adhesive bond, a physical bond, or combinations thereof~~ includes physical bonding and adhesive bonding.

58. (Currently amended) A method as defined in claim ~~[[54]]~~ 57, wherein said tape comprises polyurethane.

59. (Currently amended) A method as defined in claim ~~[[54]]~~ 57, wherein at least a portion of said tape contains multiple layers.

60. (Currently Amended) A method as defined in claim ~~[[56]]~~ 59, wherein one of said layers contains a thermoplastic material having a first thermal melting temperature and another of said layers contains a thermoplastic material having a second thermal melting temperature, said second thermal melting temperature being greater than said first thermal melting temperature.

61. (Currently amended) A method as defined in claim ~~[[54]]~~ 57, wherein at least a portion of said tape is heated to a temperature between about 10°C below and about 50°C above a thermal melting temperature of said at least a portion of said tape.

62. (Currently amended) A method as defined in claim ~~[[54]]~~ 57, wherein at least a portion of said tape is subjected to a pressure between about 40 pounds per square inch to about 120 pounds per square inch.

63. (Currently amended) An article comprising:
a first substrate having an upper surface and a lower surface and a second substrate having an upper surface and a lower surface; and
a seam defined by a continuous thermoplastic tape bonded to said upper and lower surfaces of said first fabric substrat and said upper and lower surfaces of said

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second fabric substrate, wherein said ~~[[bond]]~~ bonding between said tape and said fabric is an adhesive bond, a physical bond, or combinations thereof upper and lower surfaces of said first and second substrates includes physical bonding and, optionally, adhesive bonding.

64. (Currently amended) An article as defined in claim ~~[[60]]~~ 63, wherein said first and said second substrates are fabrics.

65. (Currently amended) An article as defined in claim ~~[[60]]~~ 63, wherein an edge defined by said upper and lower surfaces of at least one of said substrates is non-linear.

66. (Currently amended) An article as defined in claim ~~[[60]]~~ 63, wherein at least one of said surfaces of said first substrate, said second substrate, or combinations thereof, is etched.

67. (Currently amended) An article as defined in claim ~~[[60]]~~ 63, wherein said tape comprises polyurethane.

68. (Currently amended) An article as defined in claim ~~[[60]]~~ 63, wherein at least a portion of said tape contains multiple layers.

69. (Currently amended) An article as defined in claim ~~[[65]]~~ 68, wherein one of said layers contains a thermoplastic material having a first thermal melting temperature and another of said layers contains a thermoplastic material having a second thermal melting temperature, said second thermal melting temperature being greater than said first thermal melting temperature.

70. (Currently amended) An article as defined in claim ~~[[60]]~~ 63, wherein said tape is folded into a z-shaped configuration.

71. (Currently amended) An article comprising:
a first fabric having an upper surface and a lower surface and a second fabric having an upper surface and a lower surface; and
a seam defined by a continuous thermoplastic tape folded into a z-shaped configuration and bonded to said upper and lower surfaces of said first fabric and said upper and lower surfaces of said second fabric, wherein said ~~[[bond]]~~ bonding between said tape and said fabric is an adhesive bond, a physical bond, or combinations thereof

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upper and lower surfaces of said first and second fabrics includes physical bonding and adhesive bonding.

72. (Currently amended) An article as defined in claim [[68]] 71, wherein said tape comprises polyurethane.

73. (Currently amended) An article as defined in claim [[68]] 71, wherein at least a portion of said tape contains multiple layers.

74. (Currently amended) An article as defined in claim [[70]] 73, wherein one of said layers contains a thermoplastic material having a first thermal melting temperature and another of said layers contains a thermoplastic material having a second thermal melting temperature, said second thermal melting temperature being greater than said first thermal melting temperature.

75. (New) A method as defined in claim 41, wherein said bonding between said tape and said upper and lower surfaces of said first and second substrates includes adhesive bonding.

76. (New) An article as defined in claim 63, wherein said bonding between said tape and said upper and lower surfaces of said first and second substrates includes adhesive bonding.

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Amendments to th Drawings:

The attached sheets of drawings include changes to Figs. 1, 6A, and 6B. The first Replacement Sheet, which includes Fig. 1, replaces the original sheet including Fig. 1. In Fig. 1, the element inadvertently labeled "58" in the formal drawings submitted on July 20, 2001 has been correctly labeled "38", which corresponds to the original informal drawings filed with the application on April 6, 2001. An Annotated Sheet Showing Changes is included for Fig. 1.

The second Replacement Sheet, which includes Figs. 6A and 6B, replaces the original sheet including Figs. 6A and 6B. In Figs. 6A and 6B, the element inadvertently labeled "4" in the formal drawings submitted on July 20, 2001 has been correctly labeled "11", which corresponds to the original informal drawings filed with the application on April 6, 2001. Additionally, in Figs. 6A and 6B, the arrow from reference numeral "88" has been redrawn to correspond to the arrow from reference numeral "88" in the original informal drawings filed with the application on April 6, 2001. This arrow from reference numeral "88" was inadvertently misdrawn in the formal drawings submitted on July 20, 2001. An Annotated Sheet Showing Changes is included for Figs. 6A and 6B.

Attachments: 2 Replacement Sheets
 2 Annotated Sheets Showing Changes